

REMARKS

In response to the official action:

[1] The Applicant apologizes for omitting the location of the amended paragraph in the first Amendment. This is corrected now.

[2] The Applicant notes that he did not make any admissions regarding the claims.

[3] The declaration was objected to. This objection is respectfully traversed. The application is identified by the checked box before "The attached application;" the date appears on the other papers; and the post office address is not needed because the Applicant used the PTO form "FOR APPLICATION USING AN APPLICATION DATA SHEET" (see the top of the form), on which the PTO itself omitted a space for that information.

However, the Applicant submits a new declaration with the requested additional information.

[4] The drawing and specification were objected to. This objection is respectfully traversed.

(a) The Applicant intended Fig. 1 to illustrate the *principle* of his claimed subject matter and not the details: those details are shown in Fig. 3, which represents the preferred embodiment (page 9, line 12). In particular, the truck structure supporting the wheel axles is not shown in complete detail, so that the more relevant parts can be seen clearly.

The fact that the Examiner restricted Fig. 3 does not mean that a person reading the Applicant's specification would ignore Fig. 3. Fig. 3 is part of the Applicant's disclosure, and must be considered on the question of enablement. However, the Examiner only discusses Fig.

1, and the objection is respectfully traversed on this basis. (Because all the independent claims cover both figures, Fig. 3 is relevant to the question of enablement.)

As to Fig. 3, the Applicant describes an arm 340 that is "bent from [a] sheet metal blank" (page 10, line 6). The Examiner is invited to consider the portion of the arm 340 under the rod 320, where the circular dashed lines are interrupted: that is where the sheet metal lying in the plane of the paper is bent 90° and passes into the paper; from both front and rear sides of the bent portion, it curves up. The curve, shown by the solid circular line in front and the dashed lines behind, forms the surface on which the urethane belt 350 is wrapped.

The arm 340 is preferably on both sides of wheel W2. The pins 345 pass through holes in the arm 340, and these would not work if the pins were not held on both ends, because of the large forces on the belt. However, the arm 340 will work if only hinged on one side, assuming that the pins were not needed (for example, in the embodiments disclosed at page 11, lines 8-12. The shoe would not be twisted with only one arm 340, because the rods 320 support it on either side.

If the axle of the wheel W2 is supported on both sides by a truck plate, as is conventional, then the arm 340 would of course be located on one side of the truck plate (inside or outside) as a matter of design choice.

(b) The Examiner states that there are enablement problems.

(1) The Examiner writes, "The structure 100 appears to be planar structure." With respect, the Examiner has overlooked the shading lines on either side of the terminus of the lead line extending from reference numeral 120, and also the text at page 8, line 19, reading, "The second arm extension widens to meet the edges of the toe-cap lifter 110."

The Examiner has also overlooked the passage at page 8, line 6, stating that the brake shoe can be curved in the transverse direction (i.e., perpendicular to the plane of the paper and the curve mentioned at line 4). Double curvature implies three-dimensionality.

The Examiner states that “the structure would appear to have the brake shoe engage the side of the wheel W1 rather than its tread.” The Examiner again overlooks page 8, lines 6-10, describing that the brake shoe can curve around the wheel rim and therefore can engage both sides of the wheel as well as the tread (the brake shoe of Fig. 1 is a section of a torus). Engaging the side of the wheel, or the tread, or both are alternatives well within the level of skill in the art, wherein both types of engagement are very well known. It is noted that engaging the side of the wheel does result in braking, so even under the Examiner's interpretation there is no problem with enablement: the brake would still work.

(2) The Examiner states that “the wheel truck structure ... would be expected to occupy the position [of] the structure 100, so mechanical interference ... would exist.” The Applicant believes that a person skilled in the art, when working from the Applicant's disclosure, would *not* try put two things in the same place, as the Examiner proposes. The person skilled in the art would put the structure 100 *alongside* of the truck structure. In the case of a conventional truck with plates on either side of the wheels, the skilled person could have put the structure 100 either inside or outside the truck plate.

(3) The Examiner states that the arm appears to be “outside the lateral edge of the skate plate” (contrary to the Examiner's other assertion, that these parts would interfere). That is in fact the Applicant's preferred location. There is no enablement problem unless the Examiner's mistaken interpretation of a completely planar structure is adopted (then the shoe would be so wide that the edges would scrape when cornering). But that interpretation is contrary to the specification, as noted above.

(c) Attached is an affidavit stating that the working model demonstrated to the Examiner at the personal interview of May 15, 2002 was built before the filing of this application. That model incorporated the flexible-belt brake shoe of Fig. 3 but used a solid wooden arm in place of wheel W2, which had been removed; a pin went through the truck sides and the arm at the W2

axle hole. That model demonstrates that the Applicant contemplated, at the time of filing: braking against the tread of wheel W1; a non-planar design; and hinge support on both sides of the arm. The fact that the Examiner is adopting a position contrary to the model is believed to indicate that the Examiner did not give the model weight. With the submission of this affidavit, the Examiner must give weight to the model or else state on the record the reasons why he will not.

[5] Claim 17 is corrected. The Examiner is thanked for pointing out this typographic error.

[6-7] Claims 2, 3, 5, 6, 8, 9, and 11-17 were rejected under § 112, first paragraph. This rejection is respectfully traversed. The Examiner states that the claims are not enabled because mechanical interference would prevent the brake from operating. The Examiner does not identify what parts would interfere. However, in the objection of ¶ 4 the Examiner asserts that the truck and pivot arm would interfere.

In addition to the arguments presented above, the Applicant notes the Examiner's statements that the truck "would be *expected* to occupy the position [of] the structure 100, so mechanical interference ... would exist" and there is not enablement "since it *appears* that there would be mechanical interference" (emphasis added), which constitute an admission that the Applicant does not *disclose* interference: rather, the Examiner *infers* interference. .

This rejection is new and is not based on any amendment to the claims (it is based on the specification), so the Action should have been non-final. Withdrawal of finality is requested.

[8-9] Claims 17 was rejected under § 112, second paragraph. Claim 17 is amended to overcome the rejection.

[10-11] Claims 2, 3, and 12 were rejected under 35 U.S.C. §102(b) as being anticipated by Integnan '511. This rejection is respectfully traversed.

(a) Claim 2 does not recite a lifter pressed upward by *a motion* of the toe; it recites a lifter pressed upward "by the toe." The plain meaning is that the toe makes contact and presses on the lifter, and the specification supports that meaning.

Integnan's lifter is pressed upward by the arch or "crown" of the foot. The reaction force may be supplied in part by a downward motion of the toe, but the toe does not bear against the lifter; it bears against the foot bed. Therefore, the claim language excludes Integnan.

The Examiner's interpretation, as best understood, is akin to stating that a door is opened "by a user's foot" because, while the user's hand is what actually contacts the door, the force is supplied by the foot pressing in the opposite direction, against the floor. In the case of Integnan, the user's arch presses on the lifter and the toe presses, in the opposite direction, on the foot bed.

(b) The force exerted on Integnan's lifter is actually exerted, not by the toes, but by the plantar muscles or the "short muscles of the sole," that are attached at the heel and the ends of the metatarsals near to the toes. These muscles arch the foot, but do not move the toes. The Examiner can verify that arching and downward pressing of the toes are independent, merely by standing and exerting force. He will find that the toes can press downward without arching the "crown" of the foot.

(c) Integnan actively teaches against using the force of the toes to brake, asserting "the fact that the Toe itself simply and beyond any reasonable doubt has 'NO' enough power to effectively brake ... the Toe has simply no enough force even when amplified by a brake force amplifying means [for] effective braking" (col. 1, lines 32-41).

Clearly, since Integnan teaches against the use of toe-moving muscles and there are other, more powerful muscles to provide the motion that Integnan uses, this reference does not

teach using the toes, even for pressing downward. The reference teaches strongly *against* the instant claims.

The Examiner is authorized to amend claim 2 to recite a lifter “pressable upward by contact with the toe of the user to actuate the brake.”

[12] Claim 16 was rejected under 35 U.S.C. §102(b) as being anticipated by Carlsmith '231. This rejection is respectfully traversed.

Fig. 2 of Carlsmith shows braking by changing the angle of the entire foot relative to the ground. Clearly, if the person shown in Fig. 2 lifted only his or her toes, there would be no effect because the *entire* foot would not rotate. The claimed action, “pressing upward the toe of the user,” would not actuate the Carlsmith brake.

The Examiner is authorized to amend claim 16 to recite “actuating the brake just by pressing upward the toe of the user.”

Reconsideration is requested. The prior art strongly teaches against the Applicant's claims and allowance is in order. The Examiner is invited to make the suggested amendments in boldface or to propose other amendments to the claim language.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES

IN THE SPECIFICATION

Amend the paragraph starting at page 10, line 15

The belt 350 is preferably of urethane (the same material as most skate wheels) because of its toughness and abrasion resistance. Urethane belts of the type illustrated in Fig. 3 are made as timing belts in a variety of sizes, with steel braid or aromatic polyamide such as KEVLAR fabric reinforcement; they are available from BRECOflex Co., LLC, of Eatontown, NJ. The belt 350 has indentations 352 that engage gear teeth when it is used as a timing belt.

IN THE CLAIMS

17. (Once Amended) The skate braking mechanism according to claim 2, wherein the brake comprises a brake shoe that is pivoted to rotate about an axle of [another] a first wheel, so as to bear against [the one] a second wheel.